



Era Aviation, Inc.

**Era Aviation, Inc.**

## **PROCESS SPECIFICATION**

**Era Aviation, Inc.**

**Gulf Coast Division  
Lake Charles, Louisiana**

**Process Specification No. 4004**

**Application of Epoxy Primer**

Prepared By: David K. Murphy Date 1-5-94  
David K. Murphy

Approved By  
Quality Control: David K. Murphy 1-19-94  
David K. Murphy

Engineering: J. A. S. Jr. 1-13-94



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

MANUFACTURING INSPECTION DISTRICT OFFICE #43  
10100 REUNION PLACE, SUITE 650  
SAN ANTONIO, TEXAS 78216-4164

March 8, 1994

Mr. Dave Murphy  
Manager, Quality Control  
ERA Aviation, Incorporated  
P. O. Box 6550  
Lake Charles, La. 70606

Dear Mr. Murphy:

The following ERA Aviation Process Specification has been reviewed for quality control provisions and found satisfactory:

Process Spec. No. 4004, "APPLICATION OF EPOXY PRIMER,"  
Revision "A," dated January 19, 1994.

The Process Specifications with the approving FAA Form 8110-3 has been forwarded to FAA Engineering for their post review.

Sincerely,

Juan A. Garcia  
Aviation Safety Inspector (Mfg)

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**LOG OF REVISIONS**

REVISIONS	DATE	DESCRIPTION	APPROVED DATE
IR A	03/23/87 12/30/93	ALL ALL - REVISED MATERIALS LIST PREPARATION & APPLICATION PROCEDURE INSPECTION PROCEDURES ADDED MATERIAL MSDS INFORMATION	<i>P.A. Schwartz, Jr.</i> 1/19/94

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**APPLICATION OF EPOXY PRIMER**

1. **SCOPE** - This specification establishes the requirements and procedures for application of epoxy primer.

2. **MATERIALS**

Epoxy polyimide primer coating  
MIL-P-23377C  
2 Part Primer  
Part 1 910X386  
Part 2 513X307

Desoto, Inc.  
Chicago Heights  
Illinois

Epoxy primer coating  
MIL-P-53022B  
2 Part Primer  
Part A Epoxy resin component  
Part B Epoxy catalyst component

Deft Chemical  
Coatings  
Irvine, CA

Painters Tac Rag

Ditzler DX-50  
Locally Procured

Thinner - any conforming to MIL-T-81772B

3. **PREPARATION**

**CAUTION** - Avoid breathing vapors and use in well ventilated area. Avoid repeated contact with skin. Observe all precautions as shown on manufacturers material. See Appendix "A" for manufacturers mixing instructions and Appendix "B" for manufacturers material safety data sheets.

3.1 Prepare surface for priming by wiping with toluene or naptha.

3.2 Mask area to be painted, as required.

3.3 Prepare primer as follows:

3.3a Shake or stir pigmented resin component until uniform.

3.3b Temperature of components shall be 65 to 95 degrees F before mixing.

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3.3c Mix Part A and B per manufacturers recommendations. See Appendix A.

3.3d Strain material through paint strainer.

3.3e Let material stand at room temperature for 1 hour.

3.3f Shake or stir primer prior to use.

3.3g The mixture may be thinned in accordance with manufacturer's recommendations See Appendix A.

**NOTE** - Catalyzed primer shall be used within 8 hours after mixing.

#### 4. APPLICATION

4.1 Apply a single wet film to achieve a dry film thickness of 0.09 to 1.1 mils (.0009 - .0011 inches thick)

#### 5. CURING - The drying time of these primer coats will be:

MIL-P-23377C - Class 1 or 3 coating shall be tack free within 1 hour and dry hard within 6 hours  
Class 2 coating shall be tack free within 5 hours and shall be dry hard within 8 hours

MIL-P-53022B - Set to touch in 15 minutes dry hard in 1 1/2 hours dry through in 4 hours  
recoating may be done in a period of 15 minutes to 24 hours.

#### 6. INSPECTION

6.1 Applied primer shall be free from runs and sags.

6.2 A dry film thickness shall be .09 to 1.1 mils (.0009 - .0011 inches thick)

6.3 Perform a masking tape adhesion test at random locations - (min 5 areas).

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**APPENDIX A  
MANUFACTURER'S INFORMATION**

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DEFT

1017144747000

DEC 1979

10137 No.011 P.02

2-27-86



DEFT, INC., 17451 VON KARMAN AVENUE, IRVINE, CALIFORNIA 92714 / (714) 474-0400

PRODUCT INFORMATION FOR02-W-27 PRIMER, EPOXY COATINGCONFORMING TO MIL-P-53022

DESCRIPTION: MIL-P-53022, Deft Code Number 02-W-27, is a corrosion inhibiting epoxy primer that is formulated lead and chromate free. Its white color also offers advantages upon recoating with light colored finish coats.

MIXING INSTRUCTIONS:

- A. Thoroughly agitate the contents of Component A until uniform, preferably with a mechanical shaker.
- B. Add Component B slowly to Component A with constant stirring until the ratio of four parts by volume of Component A is thoroughly mixed with one part by volume of Component B.
- C. Reduce the mixed material above by mixing four parts of the mixture to one part of lacquer thinner conforming to TT-T-266. This will give a viscosity of approximately 16 seconds, #2 Zahn for conventional spray application. Allow this mixture to stand for 30 minutes, stir well, and strain prior to application. **CAUTION:** Mix only materials from the same manufacturer and do not mix more material than can be used in an 8 hour period.

APPLICATION INSTRUCTIONS:

- A. The substrate to be coated must be free from all oil, grease, dirt, and moisture. This specification primer is intended for use on steel pretreated with a phosphate coating conforming to TT-C-490, Type I, or aluminum clad, which has been treated to produce a coating conforming to MIL-C-5541.

HS-B, REV. 5/88

Cont'd...

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ID: 1444.100

DEL 10/93

10127 NO.011 P.03

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PRODUCT INFORMATION FOR  
02-W-27 PRIMER, EPOXY COATING  
CONFORMING TO MIL-P-53022

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(APPLICATION INSTRUCTIONS):

- B. Apply a single wet film to achieve a dry film thickness of 0.9 to 1.1 mils. Atomizing air pressure of 40 to 60 lbs. is generally suggested.
- C. The drying time of this primer coat will be set to touch in 15 minutes, dry hard 1 1/2 hours, and dry through in 4 hours. Recoating may be done in the period from 15 minutes to 24 hours.
- D. Finishing: This primer was designed for use under coatings conforming to MIL-C-46168, but it may also serve as a high performance primer for other finishes.
- E. Safety: All personnel mixing or applying any coating should read and understand all safety information, prior to use.

PHYSICAL CONSTANTS:

02-W-27 BASE:

VISCOSITY:	63-73 KU's
% SOLIDS BY WEIGHT	62.38%
% SOLIDS BY VOLUME	41.67%

02-W-27 CATALYST:

% SOLIDS BY WEIGHT	23.92%
% SOLIDS BY VOLUME	19.26%

02-W-27 MIXED:

% SOLIDS BY WEIGHT	56.64%
% SOLIDS BY VOLUME	37.78%

US-8, REV. 5/88

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**APPENDIX B**  
**MANUFACTURER'S MATERIAL SAFETY DATA SHEETS**

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MATERIAL SAFETY DATA SHEET  
For Coatings, Resins and Related Materials

Printed 11/23/93

Revised 06/30/98

## SECTION I - PRODUCT IDENTIFICATION

Manufacturer DEFT INC. (CAGE Code 30461) Information Phone (714) 474-0400  
17451 VON KARMAN AVE Emergency Phone (800) 424-9300  
IRVINE CA CHEMTREC Phone 800-424-9300  
92714

Product Class EPOXY  
Trade Name COMP A, MIL-P-53022B, TYPE I  
Product Code 02W027  
J A S Number NONE  
Prepared By NORM GAUL  
Title ASSISTANT TECHNICAL DIRECTOR

Hazard Ratings Health - 3  
none to extreme Fire - 3  
0 4 Reactivity - 1

## SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits ACGIH/TLV	OSHA/PEL	VP mm Hg
TOLUENE	108-88-3	5	100 ppm STEL = 150 ppm	100 ppm	22 @ 68F
CB&10 AROMATIC HYDROCARBON	64742-95-6	< 1	N.E.	N.E.	3 @ 68F
Manufacturer recommends a PEL of 100 ppm					
DISPERSION AGENT	UNKNOWN	< 1	N.E.	N.E.	0
n-PROPYL ACETATE	109-60-4	10	200 ppm STEL = 250 ppm	200 ppm	25 @ 68F
METHYL n-PROPYL KETONE	107-87-9	10	200 ppm STEL = 250 ppm	200 ppm	27 @ 68F
n-BUTYL ACETATE	123-86-4	10	150 ppm STEL = 200 ppm	150 ppm	13 @ 68F
ZINC COMPOUND	60580-61-2	< 1	N.E.	N.E.	0
MINERAL SPIRITS	64742-88-7	< 1	N.E.	N.E.	2 @ 68F
NIOSH recommends a limit of 350 mg/m3 - 8 hours TWA, and 1800 mg/m3 as determined by a 15 minute sample.					
ZINC PHOSPHATE	7779-90-0	< 5	10 mg/F3 15 STEL = N.E.	mp/F3 15 N.E.	0

THE ABOVE LISTED PRODUCTS ARE ON THE TSCA INVENTORY LIST.

N.E. = Not Established

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LEFT (INC CAGE Code 77461)  
Data Sheet for COMP A (IL-P-53022B, TYPE 1 02W027)

### SECTION III - PHYSICAL DATA

Boiling Range 110 - 136 Deg F Vapor Density Heavier than Air  
 Evap Rate 1.7 n-Butyl Acetate Liquid Density Heavier than Water.  
 Volatiles vol % 58.5 wgt% 37.6 Wgt per gallon 11.10 Pounds.  
 Spec Gravity 1.33253  
 Appearance WHITE LIQUID WITH SOLVENT ODOR  
 V O C 501 G/L  
 SOLUBILITY IN WATER Insoluble PH Not applicable  
 AUTOIGNITION TEMPERATURE No information found  
 DECOMPOSITION TEMPERATURE No information found  
 CORROSION RATE No information found  
 VISCOSITY Thin liquid to heavy viscous material

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class B Flash Point 45 F FCC LEL 0.90% EL 8.00%

#### -EXTINGUISHING MEDIA

FOAM, ALCOHOL, FLAM, DRY CHEMICAL, WATER FOG

#### -SPECIAL FIREFIGHTING PROCEDURES

Full fire fighting equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Water may be used to cool closed containers to prevent pressure build-up, auto ignition or explosion.

#### -UNUSUAL FIRE & EXPLOSION HAZARDS.

Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

### SECTION V - HEALTH HAZARD DATA

#### -PERMISSIBLE EXPOSURE LEVEL:

SEE SECTION II, HAZARDOUS INGREDIENTS.

#### -EFFECTS OF OVEREXPOSURE:

INHALATION: Irritation of the respiratory tract & acute nervous system depression characterized by the following progressive steps, headache, dizziness, staggering gait, confusion, unconsciousness or coma.

SKIN AND EYE CONTACT: SKIN: Contact with the skin can cause irritation. Symptoms may be swelling, redness, and rash.

EYES: Liquid, aerosols, or vapors are irritating and may cause tearing, redness, and swelling accompanied by a stinging sensation.

SKIN ABSORPTION: Prolonged or repeated contact can cause moderate irritation, drying, and defatting of the skin which can cause the skin to crack.

INGESTION: Acute: Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive (cont)

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Page DEPT INC CAGE Code 30461,  
Safety Data Sheet for COMP A MIL-STD-1000B TYPE 12W027

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SECTION V - HEALTH HAZARD DATA (cont)

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-EFFECTS OF OVEREXPOSURE. (cont)

Tract Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE Vapors are irritating to eyes, nose, and throat.

Inhalation may cause headaches, difficult breathing and loss of consciousness.

CHRONIC Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma or other allergic responses may develop.

PRIMARY ROUTE(S) OF ENTRY

TOPICAL (SKIN CONTACT) Yes

INGESTION (GASTRO-INTESTINAL) No

INHALATION (LUNGS) Yes

CARCINOGENICITY

NTP? NO. IARC MONOGRAPHS? NO. OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Asthma and any other respiratory disorders. Skin allergies, eczema, and dermatitis.

-FIRST AID:

INHALATION: Move to an area free from risk of further exposure. Restore breathing. Asthmatic type symptoms may develop and may be immediate or delayed by several hours. Obtain medical attention

SKIN: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse

EYES: Flush with clean lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention.

INGESTION: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical attention

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SECTION VI - REACTIVITY DATA

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STABILITY: ☐ Unstable ☒ Stable

HAZARDOUS POLYMERIZATION: ☐ May occur ☒ Will not occur

-INCOMPATIBILITY

STRONG OXIDIZING AGENTS AND STRONG LEWIS OR MINERAL ACIDS.

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SEFT. INC. CAGE Code 33461)  
 Safety Data Sheet for COMP A.MIL-P-93022B, TYPE 1 02W027)

SECTION VI - REACTIVITY DATA (cont)

- CONDITIONS TO AVOID:  
 HIGH TEMPERATURES, SPARKS, OR OPEN FLAMES. AVOID UNCONTROLLED REACTIONS WITH AMINES.
- HAZARDOUS DECOMPOSITION PRODUCTS  
 BY HIGH HEAT/TEMPERATURE. Carbon monoxide, carbon dioxide, and oxides of nitrogen. Aldehydes and acids may be formed during combustion.

SECTION VII - SPILL OR LEAK PROCEDURES

- STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
 Evacuate all non-essential personnel. Remove all sources of ignition. Flame, spark sources, hot surfaces. ventilate area. Contain and remove with inert absorbent and non-sparking tools.
- WASTE DISPOSAL METHOD.  
 Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Empty containers must be handled with care, due to product residue and flammable vapor. DO NOT incinerate closed containers.  
 ALSO SEE SECTION IV, V, VI, FOR OTHER PRECAUTIONS.  
 EPA HAZARDOUS WASTE NUMBER/CODE. D001, F003, F005  
 HAZARDOUS WASTE CHARACTERISTICS.  
 IGNITABILITY: YES  
 CORROSIVITY: NO  
 REACTIVITY: YES

SECTION VIII - SPECIAL PROTECTION INFORMATION:

- RESPIRATORY PROTECTION:  
 A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied) is necessary. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below the OSHA permissible limits.
- VENTILATION:  
 Exhaust ventilation sufficient to keep the airborne concentrations of solvent vapors or mists below their respective TLV's must be utilized. Remove all ignition sources (heat, sparks, flame, and hot surfaces).
- PROTECTIVE GLOVES:  
 Protective gloves are recommended (cotton, neoprene, rubber, polyethylene) to prevent skin contact.
- EYE PROTECTION:  
 The use of safety eyewear is recommended, including splash guards or side shields, chemical goggles or face shields.
- OTHER PROTECTIVE EQUIPMENT:  
 The use of long sleeve and long leg clothing is recommended. Remove and wash contaminated clothing before reuse.



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192 DEPT, INC. (CAGE Code 33461)  
 Material Data Sheet for COMP A-MIL-P-53022B, TYPE 1 (25W027)

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SECTION IX - SPECIAL PRECAUTIONS

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-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in buildings designed to comply with OSHA 1910.106  
 Avoid storing near high temperatures, fire, open flames, and  
 spark sources. Store in tightly closed containers. Store in  
 well ventilated areas.

-OTHER PRECAUTIONS:

Keep containers tight and upright to prevent leakage. Prevent  
 prolonged breathing of vapors or spray mists. Prolonged over-  
 exposure may cause an allergic reaction. Avoid contact with  
 skin and eyes. Do not take internally. Do not handle until the  
 manufacturers safety precautions have been read and understood.  
 Wash hands before eating, smoking, or using washroom. Smoke in  
 smoking areas ONLY.

\*\*\* TRANSPORTATION INFORMATION \*\*\*

APPLICABLE REGULATIONS 49 CFR (YES), IBCO (NO), IATA (NO)  
 MILITARY AIR (AFR 71-4) (NO)  
 PROPER SHIPPING NAME: Paint UN NUMBER UN-1263  
 REPORTABLE QUANTITY: Not applicable  
 HAZARD CLASS: Flammable liquid 3  
 REQUIRED LABELS: Flammable liquid  
 U.S. POSTAL REGULATIONS: Not allowed to send via U.S. POSTAL  
 SERVICE.

\*\*\* DISCLAIMER \*\*\*

Information contained herein is furnished without warranty of  
 any kind. Employers should use this information only as a  
 supplement to other information gathered by them and must make  
 independent determinations of suitability and completeness of  
 information from all sources to assure proper use of the  
 materials and for the safety and health of their employees.

ACTUAL VOC DETERMINED PER EPA REFERENCE METHOD 24.

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SECTION X - REGULATORY INFORMATION

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-SARA 313:

This product contains the following toxic chemicals subject to the  
 reporting requirements of section 313 of the Emergency Planning  
 and Community Right To Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
108-88-3	TOLUENE	5.67
60580-61-2	ZINC COMPOUND	0.17
7779-90-0	ZINC PHOSPHATE	3.94
(cont.)		

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DEFT INC CAGE Code 3D461,  
Data Sheet for COMP A MIL-PRC-3223 (PF 02W027)

## SECTION X - REGULATORY INFORMATION (cont.)

## -SARA 313 (cont.)

This product contains a zinc compound, 34.5% by weight.

## -PROP 65-CARCINOGENIC

WARNING: This product contains a chemical known to the state of California to cause cancer.

CAS#	Chemical Name
None	None

## -PROP 65-TETRATOGENIC

WARNING: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

CAS#	Chemical Name
108-88-3	TOLUENE

## -PROP 65-CARCINOGENIC &amp; TETRATOGENIC

WARNING: This product may contain a chemical known to the state of California to cause cancer or birth defects or other reproductive harm.

CAS#	Chemical Name
None	None

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Page 1 MATERIAL SAFETY DATA SHEET Printed 11/23/93  
For Coatings, Resins and Related Interiors  
Revised 06/30/88

### SECTION I - PRODUCT IDENTIFICATION

Manufacturer DEFT, INC. (CAGE Code 33461) Information Phone (714) 474-0400  
17451 VON KARMAN AVE Emergency Phone (800) 424-9300  
CHEMTREC Phone 300-424-9300  
IRVINE CA  
92714

Product Class AMINE  
Trade Name COMP B, MIL-P-53022B, TYPE I  
Product Code 02W027CAT  
C A S Number NONE  
Prepared By NORM GAUL  
Title ASSISTANT TECHNICAL DIRECTOR

Hazard Ratings Health - 3  
none - extreme Fire - 3  
O --- 4 Reactivity - 1

### SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	weight %	Exposure Limits	VP
			ACGIH/TLV	OSHA/PEL
METHYL n-PROPYL KETONE	107-87-9	5	200 ppm	200 ppm @ 68F
		STEL = 250 ppm	250 ppm	13
n-BUTYL ACETATE	123-84-4	10	150 ppm	150 ppm @ 68F
		STEL = 200 ppm	200 ppm	9
2-BUTOXYETHANOL	111-76-2	30	25 ppm	25 ppm @ 77F
		STEL = N.E.	N.E.	33
ISOPROPANOL ANHYDROUS	67-63-0	10	400 ppm	400 ppm @ 68F
		STEL = 500 ppm	500 ppm	15
METHYL ISOBUTYL KETONE	108-10-1	10	50 ppm	50 ppm @ 68F
		STEL = 75 ppm	75 ppm	22
TOLUENE	108-88-3	5	100 ppm	100 ppm @ 68F
		STEL = 150 ppm	150 ppm	1
DIETHYLENETRIAMINE	111-40-0	5	1 ppm	1 ppm @ 68F
		STEL = N.E.	N.E.	

THE ABOVE LISTED PRODUCTS ARE ON THE TSCA INVENTORY LIST

N.E. = Not Established

### SECTION III - PHYSICAL DATA

Boiling Range: 181 - 390 Deg. F Vapor Density: Heavier than Air.  
Evap. Rate: 1.3 x n-Butyl Acetate Liquid Density: Lighter than Water  
Volatiles vol % 78.8 Wgt% 72.6 Wgt per gallon: 7.74 Pounds.  
Spec. Gravity 0.92917  
Appearance: AMBER LIQUID WITH SOLVENT ODOR  
V.O.C.: 668 G/L  
SOLUBILITY IN WATER: Insoluble PH: Not applicable  
AUTOIGNITION TEMPERATURE: No information found  
DECOMPOSITION TEMPERATURE: No information found  
CORROSION RATE: No information found  
VISCOSITY: Thin liquid to heavy viscous material

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Left, INC. CAGE Code 33461)  
Safety Data Sheet for DMP 0.MIL-P-93022B, TYPE 1 02W027CAT)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class. IB Flash Point. 45 F TCC LEL. 1.00% UEL 12.70%

-EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

-SPECIAL FIREFIGHTING PROCEDURES:

Full fire fighting equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Water may be used to cool closed containers to prevent pressure build-up, auto ignition or explosion.

-UNUSUAL FIRE & EXPLOSION HAZARDS:

Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

SEE SECTION II, HAZARDOUS INGREDIENTS

-EFFECTS OF OVEREXPOSURE:

INHALATION: Irritation of the respiratory tract & acute nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.

SKIN AND EYE CONTACT SKIN: Contact with the skin can cause irritation. Symptoms may be swelling, redness, and rash.

EYES: Liquid, aerosols, or vapors are irritating and may cause tearing, redness, and swelling accompanied by a stinging sensation.

SKIN ABSORPTION: Prolonged or repeated contact can cause moderate irritation, drying, and defatting of the skin which can cause the skin to crack.

INGESTION: Acute. Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis.

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE: Vapors are irritating to eyes, nose, and throat.

Inhalation may cause headaches, difficult breathing and loss of consciousness.

CHRONIC: Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma or other allergic responses may develop. Potential for kidney and liver damage.

PRIMARY ROUTE(S) OF ENTRY

TOPICAL (SKIN CONTACT): Yes

(cont.)

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Page DEFT, INC CAGE Code 33461,  
 Material Data Sheet for DMP B MIL-PRC-30200, TYPE I 02W027CAT)

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 SECTION V - HEALTH HAZARD DATA (cont)  
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-EFFECTS OF OVEREXPOSURE (cont)

INGESTION (GASTRO-INTESTINAL) No  
 INHALATION (LUNGS) Yes

MUTAGENICITY

NTP? NO, IARC MONOGRAPHS? NO, OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE.

Asthma and any other respiratory disorders Skin allergies,  
 eczema, and dermatitis

-FIRST AID:

INHALATION: Move to an area free from risk of further exposure.  
 Remove clothing. Asthmatic type symptoms may develop and may  
 be immediate or delayed by several hours. Obtain medical  
 attention.

SKIN: Remove contaminated clothing. Wash affected areas  
 thoroughly with soap and water. Wash contaminated clothing  
 thoroughly before reuse.

EYES: Flush with clean lukewarm water low pressure, for at  
 least 15 minutes, occasionally lifting eyelids. Obtain  
 medical attention.

INGESTION: Do not induce vomiting. Do not give anything to an  
 unconscious person. Obtain medical attention.

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 SECTION VI - REACTIVITY DATA  
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STABILITY [ ] Unstable [x] Stable  
 HAZARDOUS POLYMERIZATION [x] May occur [ ] Will not occur

-INCOMPATIBILITY

OXIDIZING MATERIALS AND STRONG ACIDS. EPOXY RESINS UNDER  
 UNCONTROLLED CONDITIONS

-CONDITIONS TO AVOID:

HIGH TEMPERATURES. EPOXY RESINS UNDER UNCONTROLLED CONDITIONS.

-HAZARDOUS DECOMPOSITION PRODUCTS:

BY HIGH HEAT/TEMPERATURE: Carbon monoxide, carbon dioxide,  
 and oxides of nitrogen.

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 SECTION VII - SPILL OR LEAK PROCEDURES  
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-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate all non-essential personnel. Remove all sources of  
 ignition (flame, spark sources, hot surfaces). Ventilate area.  
 Contain and remove with inert absorbent and non-sparking tools.-----

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Page 4 DEFT, INC CAGE Code 33461  
Material Data Sheet for COMP B MIL-PR-83022B, TYPE 1 (02W027CAT)

SECTION VII - SPILL OR LEAK PROCEDURES (cont.)

-WASTE DISPOSAL METHOD:

Waste must be disposed of in accordance with Federal, state, and local environmental control regulations. Empty containers must be handled with care, due to product residue and flammable vapor. DO NOT incinerate closed containers.

ALSO SEE SECTION IV, V, VI, FOR OTHER PRECAUTIONS.

EPA HAZARDOUS WASTE NUMBER/CODE: D001, F003, F005

HAZARDOUS WASTE CHARACTERISTICS:

IGNITABILITY YES

CORROSIVITY NO

REACTIVITY YES

SECTION VIII - SPECIAL PROTECTION INFORMATION

-RESPIRATORY PROTECTION:

A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied) is necessary. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below the OSHA permissible limits.

-VENTILATION:

Exhaust ventilation sufficient to keep the airborne concentrations of solvent vapors or mists below their respective TLV's must be utilized. Remove all ignition sources (heat, sparks, flame, and hot surfaces).

-PROTECTIVE GLOVES

Protective gloves are recommended (cotton, neoprene, rubber, polyethylene) to prevent skin contact.

-EYE PROTECTION:

The use of safety eyewear is recommended, including splash guards or side shields, chemical goggles or face shields.

-OTHER PROTECTIVE EQUIPMENT:

The use of long sleeve and long leg clothing is recommended. Remove and wash contaminated clothing before reuse.

SECTION IX - SPECIAL PRECAUTIONS

-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in buildings designed to comply with OSHA 1910.106. Avoid storing near high temperatures, fire, open flames, and spark sources. Store in tightly closed containers. Store in well ventilated areas.

-OTHER PRECAUTIONS:

Keep containers tight and upright to prevent leakage. Prevent prolonged breathing of vapors or spray mists. Prolonged over-exposure may cause an allergic reaction. Avoid contact with skin and eyes. Do not take internally. Do not handle until the manufacturers safety precautions have been read and understood. Wash hands before eating, smoking, or using washroom. Smoke in (cont.)

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age . DEFT. INC. (CAGE Code 33461.  
 Material Safety Data Sheet for COMP B, MIL-P-53022B, TYPE 1 02W027CAT)

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SECTION IX - SPECIAL PRECAUTIONS (cont)

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-OTHER PRECAUTIONS: (cont )  
 smoking areas ONLY

\*\*\* TRANSPORTATION INFORMATION \*\*\*

APPLICABLE REGULATIONS: 49 CFR (YES); IMCO (NO); IATA (NO)  
 MILITARY AIR (AFR 71-4) (NO)  
 PROPER SHIPPING NAME: Paint UN NUMBER UN-1263  
 REPORTABLE QUANTITY: Not applicable  
 HAZARD CLASS: Flammable liquid 3  
 REQUIRED LABELS: Flammable liquid  
 U.S. POSTAL REGULATIONS: Not allowed to send via U.S. POSTAL  
 SERVICE

\*\*\* DISCLAIMER \*\*\*

Information contained herein is furnished without warranty of  
 any kind. Employers should use this information only as a  
 supplement to other information gathered by them and must make  
 independent determinations of suitability and completeness of  
 information from all sources to assure proper use of the  
 materials and for the safety and health of their employees

ACTUAL VOC DETERMINED PER EPA REFERENCE METHOD 24

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SECTION X - REGULATORY INFORMATION

-----

-SARA 313:

This product contains the following toxic chemicals subject to the  
 reporting requirements of section 313 of the Emergency Planning  
 and Community Right To Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
111-76-2	2-BUTOXYETHANOL	31.78
67-63-0	ISOPROPANOL ANHYDROUS	8.13
108-10-1	METHYL ISOBUTYL KETONE	10.18
108-88-3	TOLUENE	6.73

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Material Safety Data Sheet for COMP B, MIL-P-53022B, TYPE I (Q2W027CAT)

## SECTION X - REGULATORY INFORMATION (cont.)

## -PROP 65-CARCINOGENIC

WARNING This product contains a chemical known to the state of California to cause cancer

CAS#

Chemical Name

None

## -PROP 65-TETRATOGENIC

WARNING This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

CAS#

Chemical Name

108-88-3

TOLUENE

## -PROP 65-CARCINOGENIC &amp; TETRATOGENIC

WARNING This product may contain a chemical known to the state of California to cause cancer or birth defects or other reproductive harm

CAS#

Chemical Name

None

ERA PROCESS SPECIFICATION



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MATERIAL SAFETY DATA SHEET  
D:SCOT, INC.

03/17/89

PREPARED: 10/12/88

## SECTION I - PRODUCT IDENTIFICATION

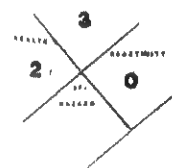
MANUFACTURER: D:SCOT, INC.  
BOX 5033  
1700 S. MOUNT PROSPECT  
DES PLAINES IL 60017

INFORMATION PHONE: 312/391-9000  
EMERGENCY PHONE: 312/391-9000

PRODUCT CLASS: PRIMER ACTIVATOR  
TRADE NAME: PRIMER COATING EPOXY POLY  
PRODUCT CODE: 910000  
C.A.S. NUMBER: 1A-MIXTURE  
PREPARED BY: CHERRIE M. STEVENSON  
TITLE: TECHNICAL INFORMATION SPECIALIST  
D.O.T. HAZARD CLASS: FLAMMABLE LIQUID  
PROPER SHIPPING NAME: FLAMMABLE LIQUID, NOS

HAZARD RATINGS:  
NONE -> EXTREME  
C -> 4

ID #: JN1993



## SECTION II - INGREDIENTS

INGREDIENT	CAS #	WEIGHT	EXPOSURE LIMITS	VP
*XYLENE	1330-20-7	5	100 PPM	10.0
NON-HAZARDOUS ADDITIVES, RESIN AND PIGMENTS	TRADE SECRET	20	UNDETERMINED	
*TOLUENE	108-88-3	20	100 PPM	22.0
ETHYL ALCOHOL	64-17-5	25	1000 PPM	49.1
METHANOL	67-56-1	< 5	5-200 (250)	97.7
ETHYL ACETATE	141-79-6	< 5	400 PPM	75.0
ISOPROPANOL	67-63-0	25	400 PPM	33.0
ALIPHATIC AMINE	TRADE SECRET	< 5	UNDETERMINED	

\*\*\* ALL INGREDIENTS IN THIS PRODUCT ARE LISTED IN THE T.S.C.A. INVENTORY.

IF AN INGREDIENT IS LISTED WITH A SINGLE ASTERISK, THE  
CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION  
313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION  
ACT OF 1980 AND 40 CFR PART 372.

PERCENT BY WEIGHT:  
TO NEAREST 5% FOR SUBSTANCES 5-75%  
<5.0% FOR SUBSTANCES 1.0-5.0%

S=SKIN; C=CEILING LIMIT  
NE=NOT ESTABLISHED  
NA=NOT APPLICABLE

## SECTION III - PHYSICAL DATA

BOILING RANGE: 147 - 240 DEG. F  
EVAP. RATE: 1- BUTYL ACETATE  
VOLATILES VOLUME: 100%  
APPEARANCE: LIQUID, SOLVENT ODOR

VAPOR DENSITY: HEAVIER THAN AIR.  
LIQUID DENSITY: LIGHTER THAN WATER.  
WT PER GALLON: 7.07 POUNDS.  
V.O.C.: 653 GRAMS/LITER

ERA PROCESS SPECIFICATION

ERA PS 4004 REV A DATE 12/30/93

DELROT, I.C.  
NATURAL SAFETY DATA SHEET FOR: 910X386

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASS: FLASH POINT: 34 DEG F LEL : 1.20%

-EXTINGUISHING MEDIA:  
EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR FOAM).

-SPECIAL FIRE FIGHTING PROCEDURES:  
VAPORS MAY ACCUMULATE IN INADEQUATELY VENTILATED OR CONFINED AREAS. VAPORS MAY FORM EXPLOSIVE MIXTURES WITH AIR. VAPORS MAY TRAVEL LONG DISTANCES. FLASHBACK OR FLAME TO THE HANDLING SITE MAY OCCUR. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

-UNUSUAL FIRE & EXPLOSION HAZARDS:  
WATER SPRAY MAY BE INEFFECTIVE. COOL FIRE EXPOSED CONTAINERS WATER. FOG NOZZLES ARE PREFERABLE. WEAR NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SECTION V - HEALTH HAZARD DATA

-PERMISSABLE EXPOSURE LEVEL:  
SEE SECTION II (NOT ESTABLISHED FOR PRODUCT).

-EFFECT OF OVEREXPOSURE:

-INHALATION  
EXPOSURE MAY CAUSE NASAL AND RESPIRATORY IRRITATION AND ACUTE CENTRAL NERVOUS SYSTEM DEPRESSION CHARACTERIZED BY HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION OR UNCONSCIOUSNESS. ASPHYXIATION MAY RESULT FROM BREATHING OXYGEN DEFICIENT AIR.

-SKIN CONTACT:  
PROLONGED OR REPEATED CONTACT MAY CAUSE IRRITATION, DEFATTING OR DERMATITIS.  
PROLONGED OR REPEATED SKIN CONTACT MAY ALSO RESULT IN SKIN SENSITIZATION IN SOME INDIVIDUALS.

-EYE CONTACT:  
CAUSES IRRITATION.

-INGESTION:  
MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.  
ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.  
PRODUCT CONTAINS METHANOL AND MAY BE FATAL OR CAUSE BLINDNESS IF SWALLOWED. CANNOT BE MADE NONPOISONOUS.

-OTHER HEALTH INFORMATION:  
AVOID PROLONGED AND REPEATED CONTACT WITH THIS PRODUCT.  
REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. EFFECTS INCLUDE CONCENTRATION DIFFICULTIES, DIMINISHED MANUAL DEXTERITY AND MEMORY LOSS.  
LABORATORY ANIMALS EXPOSED TO HIGH DOSES OF XYLENE SHOWED EVIDENCE OF LIVER, KIDNEY, LUNG, SPLEEN, HEART AND ADRENALS.  
RATS AND MICE EXPOSED DURING PREGNANCY SHOWED EMBRYO/FETO-TOXIC EFFECTS.  
LABORATORY ANIMALS EXPOSED TO HIGH DOSES OF TOLUENE SHOWED EVIDENCE OF EFFECTS IN THE LIVER, KIDNEYS, LUNG AND SPLEEN.  
(CONT.)

ERA PROCESS SPECIFICATION

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DATE 12/30/93

DESOTO, INC.  
MATERIAL SAFETY DATA SHEET FOR: 910X130

SECTION V - HEALTH HAZARD DATA (CONT.)

- -OTHER HEALTH INFORMATION: (CONT.)  
 -MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:  
 PRE-EXISTING SKIN, LUNG AND EYE CONDITIONS.  
 -FIRST AID:  
 -INHALATION:  
 REMOVE TO FRESH AIR FROM EXPOSURE. GIVE ARTIFICIAL RESPIRATION  
 OR CARDIOPULMONARY RESUSCITATION (CPR) IF REQUIRED. IF  
 BREATHING IS DIFFICULT, GIVE OXYGEN. KEEP WARM AND QUIET. GET  
 MEDICAL ATTENTION.  
 -SKIN CONTACT:  
 WASH AFFECTED AREAS WITH SOAP AND WATER. DO NOT USE SOLVENTS.  
 REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE. GET MEDICAL  
 ATTENTION.  
 -EYE CONTACT:  
 FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION  
 PREFERABLY FROM AN OPHTHALMOLOGIST.  
 -INGESTION:  
 GET MEDICAL ATTENTION.

SECTION VI - REACTIVITY DATA

- STABILITY: [ ] UNSTABLE [X] STABLE  
 HAZARDOUS POLYMERIZATION: [ ] MAY OCCUR [X] WILL NOT OCCUR  
 -INCOMPATIBILITY:  
 -CONDITIONS TO AVOID:  
 NONE RECOGNIZED UNLESS NOTED BELOW.  
 -HAZARDOUS DECOMPOSITION PRODUCTS:  
 PRODUCTS OF COMBUSTION ARE HAZARDOUS INCLUDING CARBON  
 MONOXIDE AND CARBON DIOXIDE.

SECTION VII - SPILL OR LEAK PROCEDURES

- -ENVIRONMENTAL RELEASES  
 DEPENDING ON THE QUANTITY AND CIRCUMSTANCES, AN UNAUTHORIZED  
 RELEASE OF THIS MATERIAL TO THE ENVIRONMENT MAY BE REPORTABLE  
 UNDER FEDERAL LAW TO THE NATIONAL RESPONSE CENTER  
 (800-424-6622). STATE AND LOCAL GOVERNMENTAL AGENCIES MAY ALSO  
 HAVE REPORTING REQUIREMENTS OF WHICH YOU SHOULD BE AWARE.  
 REMOVE ALL SOURCES OF IGNITION. WEAR PERSONAL PROTECTIVE  
 EQUIPMENT TO AVOID BREATHING VAPORS AND SKIN AND EYE CONTACT  
 WITH THE SPILLED MATERIAL. USE NON-SPARKING TOOLS. USE  
 EMERGENCY RESPONSE PROFESSIONAL IF MANAGING A RELEASE IS BE-  
 YOND THE CAPABILITY OF IN-HOUSE PERSONNEL. FOR SMALL SPILLS,  
 DIKE AND ABSORB WITH INERT MATERIAL.

ERA PROCESS SPECIFICATION

ERA PS 4004 REV A DATE 12/30/93

DESOTO, INC.  
MATERIAL SAFETY DATA SHEET FOR: 910X386

SECTION VII - SPILL OR LEAK PROCEDURES (CONT.)

-WASTE DISPOSAL METHOD:

WHEN DISPOSING OF THIS MATERIAL, ENSURE THAT IT IS PACKAGED, STORED, TRANSPORTED AND OTHERWISE MANAGED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. NO DISPOSAL METHOD IS TO BE USED THAT WOULD POSE AN ENVIRONMENTAL OR HUMAN HEALTH THREAT INCLUDING ANY WHICH WOULD CONTAMINATE GROUND OR SURFACE WATER.

SECTION VIII - SPECIAL PROTECTION INFORMATION:

-RESPIRATORY PROTECTION:

IN AREAS WHERE TLVS IN SECTION II MAY BE EXCEEDED OR IF SPRAY MIST IS PRESENT, USE NIOSH/MSHA APPROVED RESPIRATORY PROTECTION APPROPRIATE FOR INDICATED COMPONENTS. IN CONFINED AREAS USE NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATORS. FOLLOW RESPIRATOR MANUFACTURER'S DIRECTIONS AND OSHA REGULATIONS (29 CFR 1910.134) FOR RESPIRATOR USE.

-VENTILATION:

WHERE EMPLOYEES MAY BE EXPOSED, PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME AND PATTERN TO KEEP LEVEL OF HAZARDOUS INGREDIENTS IN SECTION II BELOW RECOMMENDED (ACGIH TLV) OR REGULATED (OSHA PEL) LIMIT. WHERE EMPLOYEES WILL NOT BE EXPOSED, KEEP LEVEL BELOW 25% OF LEL IN SECTION II.

-PROTECTIVE GLOVES:

WEAR CHEMICALLY RESISTANT GLOVES.

-EYE PROTECTION:

SAFETY GLASSES WITH SIDE SHIELDS OR GOGGLES.

-OTHER PROTECTIVE EQUIPMENT:

AVOID SKIN CONTACT BY USE OF OTHER PROTECTIVE CLOTHING. A SAFETY SHOWER, AN EYE BATH AND WASHING FACILITIES SHOULD BE AVAILABLE.

SECTION IX - SPECIAL PRECAUTIONS

-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS AND FLAME. DO NOT STORE ABOVE 49 DEG C (120 DEG F). STORE FLAMMABLE LIQUIDS IN ACCORDANCE WITH APPLICABLE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AND GOVERNMENTAL REGULATIONS. GROUNDING AND BONDING PROCEDURES SHOULD BE FOLLOWED WHEN TRANSFERRING THIS MATERIAL. AVOID FREE FALL OF LIQUID. DO NOT SMOKE WHERE THIS MATERIAL IS USED OR STORED. DO NOT APPLY TO HOT SURFACES.

-OTHER PRECAUTIONS:

EMPTY DRUMS MAY CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, PUNCTURE OR WELD ON OR NEAR DRUM. DO NOT TAKE INTERNALLY. DO NOT DELIBERATELY CONCENTRATE THIS PRODUCT AND INHALE THE VAPORS. PREVENT PROLONGED CONTACT WITH CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSE. VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND MAY COLLECT IN LOW OR CONFINED AREAS. DO NOT ENTER SUCH AREAS WITHOUT FOLLOWING APPROPRIATE PROCEDURES INCLUDING AIR MONITORING, USE OF SUPPLIED AIR IF NECESSARY AND THE PRESENCE OF AN OBSERVER (CONT.)

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DESOTO, INC.  
MATERIAL SAFETY DATA SHEET FOR: 910X38a

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SECTION IX - SPECIAL PRECAUTIONS (CONT.)  
-----

-OTHER PRECAUTIONS: (CONT.)  
FOR ASSISTANCE.

OBSERVE PRECAUTIONARY LABEL WARNINGS.

ERA PROCESS SPECIFICATION

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Page . MATERIAL SAFETY DATA SHEET Printed 11/23/93  
 For Coatings, Resins and Related Materials  
 Revised 07/25/88

## SECTION I - PRODUCT IDENTIFICATION

Manufacturer DEFT, INC. (CAGE Code 33461) Information Phone: (714) 474-0400  
 17451 VON KARMAN AVE. Emergency Phone: (800) 424-9300  
 CHEMTREC Phone 800-424-9300  
 IRVINE CA  
 92714

Product Class: SOLVENT BLEND Hazard Ratings Health - 3  
 Trade Name MIL-T-81772B, TYPE II, EPOXY R none -> extreme Fire - 3  
 Product Code #IS-237 Reactivity - 1  
 C A S Number NONE

## SECTION II - HAZARDOUS INGREDIENTS

Ingredients	CAS #	Weight %	Exposure Limits	VP
			ACGIH/TLV OSHA/PEL	mm Hg
METHYL ETHYL KETONE	78-93-3	0	200 ppm	70
		STEL = 300 ppm	300 ppm	@ 68F
METHYL ISOBUTYL KETONE	108-10-1	20	50 ppm	15
		STEL = 75 ppm	75 ppm	@ 68F
PM GLYCOL ETHER	107-98-2	35	100 ppm	12.5
		STEL = 150 ppm	150 ppm	

THE ABOVE LISTED PRODUCTS ARE ON THE TSCA INVENTORY LIST

## SECTION III - PHYSICAL DATA

Boiling Range: 175 - 248 Deg. F Vapor Density: heavier than Air.  
 Evap. Rate 2.75 x n-Butyl Acetate Liquid Density: Lighter than Water  
 volatiles vol % 100.0 Wgt% 100.0 Wgt per gallon 6.99 Pounds.  
 Spec. Gravity: 0.83914  
 Appearance: CLEAR LIQUID WITH SOLVENT ODOR  
 V.O.C.: 837 G/L  
 SOLUBILITY IN WATER: Insoluble PH: Not applicable  
 AUTOIGNITION TEMPERATURE: No information found  
 DECOMPOSITION TEMPERATURE: No information found  
 CORROSION RATE: No information found  
 VISCOSITY: Thin liquid

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability Class: 3 Flash Point: 23 F TCC LEL: 1.20% UEL: 13.80%  
 -EXTINGUISHING MEDIA:  
 FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG  
 -SPECIAL FIREFIGHTING PROCEDURES:  
 Full fire fighting equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Water may be used to cool closed containers to prevent pressure build-up, auto ignition or explosion.

ERA PROCESS SPECIFICATION

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Page 2 DEPT. INC (CAGE Code 30461)  
 Material Safety Data Sheet for MIL-T-81720, TYPE II EPOXY R (#IS-237)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA (cont.)

-UNUSUAL FIRE & EXPLOSION HAZARDS:

Keep containers tightly closed. Isolate from heat, sparks, electrical equipment and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent.

SECTION V - HEALTH HAZARD DATA

-PERMISSIBLE EXPOSURE LEVEL:

SEE SECTION II, HAZARDOUS INGREDIENTS

-EFFECTS OF OVEREXPOSURE:

INHALATION: Irritation of the respiratory tract & acute nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma.

SKIN AND EYE CONTACT: SKIN: Contact with the skin can cause irritation. Symptoms may be swelling, redness, and rash.

EYES: Liquid, aerosols, or vapors are irritating and may cause tearing, redness, and swelling accompanied by a stinging sensation.

SKIN ABSORPTION: Prolonged or repeated contact can cause moderate irritation, drying, and defatting of the skin which can cause the skin to crack.

INGESTION: Acute: Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of the solvent, resulting in chemical pneumonitis.

HEALTH HAZARDS (ACUTE AND CHRONIC)

ACUTE: Vapors are irritating to eyes, nose, and throat.

Inhalation may cause headaches, difficult breathing and loss of consciousness.

CHRONIC: Prolonged contact will cause drying and cracking of the skin, due to defatting action. Skin sensitization, asthma or other allergic responses may develop.

PRIMARY ROUTE(S) OF ENTRY:

TOPICAL (SKIN CONTACT): Yes

INGESTION (GASTRO-INTESTINAL): No

INHALATION (LUNGS): Yes

CARCINOGENICITY:

NTP? NO, IARC MONOGRAPHS? NO, OSHA REGULATED? NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Asthma and any other respiratory disorders. Skin allergies, eczema, and dermatitis.

(cont.)

ERA PROCESS SPECIFICATION

ERA PS

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Page: 3 DEFT, INC. (CAGE Code 33461)  
Material Safety Data Sheet for: MIL-T-81772B, TYPE II, EPOXY P(#IS-237)

=====

SECTION V - HEALTH HAZARD DATA (cont.)

-----

-EFFECTS OF OVEREXPOSURE: (cont.)

-FIRST AID:

INHALATION: Move to an area free from risk of further exposure. Restore breathing. Asthmatic type symptoms may develop and may be immediate or delayed by several hours. Obtain medical attention.

SKIN: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse.

EYES: Flush with clean lukewarm water (low pressure) for at least 15 minutes, occasionally lifting eyelids. Obtain medical attention.

INGESTION: Do not induce vomiting. Do not give anything to an unconscious person. Obtain medical attention.

=====

SECTION VI - REACTIVITY DATA

-----

STABILITY: ☐ Unstable ☒ Stable  
HAZARDOUS POLYMERIZATION: ☐ May occur ☒ Will not occur

-INCOMPATIBILITY

STRONG OXIDIZING AGENTS.

-CONDITIONS TO AVOID:

HIGH TEMPERATURES, SPARKS, OR OPEN FLAMES.

-HAZARDOUS DECOMPOSITION PRODUCTS:

BY HIGH HEAT/TEMPERATURE: Carbon monoxide, carbon dioxide, and oxides of nitrogen.

=====

SECTION VII - SPILL OR LEAK PROCEDURES

-----

-STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Evacuate all non-essential personnel. Remove all sources of ignition (flame, spark sources, hot surfaces). Ventilate area. Contain and remove with inert absorbent and non-sparking tools.

-WASTE DISPOSAL METHOD:

Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Empty containers must be handled with care, due to product residue and flammable vapor. DO NOT incinerate closed containers.

ALSO SEE SECTION IV, V, VI, FOR OTHER PRECAUTIONS.

EPA HAZARDOUS WASTE NUMBER/CODE: D001, F003, F005

HAZARDOUS WASTE CHARACTERISTICS:

IGNITABILITY YES  
CORROSIVITY NO  
REACTIVITY YES

ERA PROCESS SPECIFICATION



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Page: 4 DEFT, INC. (CAGE Code 30461)  
 Material Safety Data Sheet for: MIL-T-81772B, TYPE II, EPOXY R(#IS-237)

-----  
 SECTION VIII - SPECIAL PROTECTION INFORMATION:  
 -----

-RESPIRATORY PROTECTION:

A respirator that is recommended or approved for use in an organic vapor environment (air purifying or fresh air supplied) is necessary. Observe OSHA regulations for respirator use. Ventilation should be provided to keep exposure levels below the OSHA permissible limits.

If TLV limits can be maintained and documented below the OSHA/ACGIH limits, an air supplied respirator may not be required. However, other OSHA/NIOSH approved respirators may be used.

-VENTILATION:

Exhaust ventilation sufficient to keep the airborne concentrations of solvent vapors or mists below their respective TLV's must be utilized. Remove all ignition sources (heat, sparks, flame, and hot surfaces).

-PROTECTIVE GLOVES:

Protective gloves are recommended (cotton, neoprene, rubber polyethylene) to prevent skin contact.

-EYE PROTECTION:

The use of safety eyewear is recommended, including splash guards or side shields, chemical goggles or face shields.

-OTHER PROTECTIVE EQUIPMENT:

The use of long sleeve and long leg clothing is recommended. Remove and wash contaminated clothing before reuse.

-----  
 SECTION IX - SPECIAL PRECAUTIONS  
 -----

-PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

Store in buildings designed to comply with OSHA 1910.106. Avoid storing near high temperatures, fire, open flames, and spark sources. Store in tightly closed containers. Store in well ventilated areas.

-OTHER PRECAUTIONS:

Keep containers tight and upright to prevent leakage. Prevent prolonged breathing of vapors or spray mists. Prolonged over-exposure may cause an allergic reaction. Avoid contact with skin and eyes. Do not take internally. Do not handle until the manufacturers safety precautions have been read and understood. Wash hands before eating, smoking, or using washroom. Smoke in smoking areas ONLY.

\*\*\* TRANSPORTATION INFORMATION \*\*\*

APPLICABLE REGULATIONS: 49 CFR (YES); IMCO (NO); IATA (NO)  
 MILITARY AIR (AFR 71-4) (NO)

PROPER SHIPPING NAME: Paint UN NUMBER: UN-1263

REPORTABLE QUANTITY: Not applicable

HAZARD CLASS: Flammable liquid 3

REQUIRED LABELS: Flammable liquid

U.S. POSTAL REGULATIONS: Not allowed to send via US POSTAL SERVICE.

\*\*\* DISCLAIMER \*\*\*

(cont.)

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Page: 5 DEFT. INC. (CAGE Code 33461)  
 Material Safety Data Sheet For: MIL-T-81772B, TYPE II, EPOXY R(#IS-237)

-----  
 SECTION IX - SPECIAL PRECAUTIONS (cont.)  
 -----

-OTHER PRECAUTIONS: (cont.)

Information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of the materials and for the safety and health of their employees.

ACTUAL VOC DETERMINED PER EPA REFERENCE METHOD 24.

-----  
 SECTION X - REGULATORY INFORMATION  
 -----

-SARA 313:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right To Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
78-93-3	METHYL ETHYL KETONE	48.12
108-10-1	METHYL ISOBUTYL KETONE	18.91

-PROP 65-CARCINOGENIC

WARNING: This product contains a chemical known to the state of California to cause cancer.

CAS#	Chemical Name
	None

-PROP 65-TETRATOGENIC:

WARNING: This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

CAS#	Chemical Name
	None

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DATE 12/30/93

Page: 5 DEFT, INC. (CAGE Code 33461)  
Material Safety Data Sheet For: MIL-T-81772B, TYPE II, EPOXY R(#16-237)

-----  
SECTION X - REGULATORY INFORMATION (cont.)  
-----

-PROP 65-CARCINOGENIC & TETRATOGENIC

WARNING: This product may contain a chemical known to the state of California to cause cancer or birth defects or other reproductive harm

CAS#

Chemical Name

None

ERA PROCESS SPECIFICATION